1. An output circuit for use in an implantable defibrillation system, said circuit comprising:

capacitor means for storing a predetermined voltage;

first and second switching means, both connected to said capacitor means and capable of being triggered to active conditions;

a ground-return terminal;

first and second electrode lead terminals connected to said first and second switching means, respectively;

~~[third and]~~ fourth and third switching means connected to said first and second lead terminals, respectively, for selectively connecting said first and second electrode lead terminals, respectively, to said ground-return terminal when triggered to active conditions; and

triggering means for triggering said first and said third switching means to said active conditions to allow voltage stored by said capacitor means to discharge through said first and second electrode lead terminals in a first polarity, and for triggering said second and fourth switching means to said active conditions to allow voltage stored by said capacitor means to discharge through said first and second electrode lead terminals in a second polarity opposite to said first polarity.

2. The circuit of claim 1, and further comprising first and second push-pull driver circuits; first and second control pins connected to said first and second push-pull driver circuits, respectively; and first and second pulse transformers; said first and second pulse transformers including primary and secondary windings, said secondary windings being connected to said first and second switching means, said primary windings being connected to said push-pull driver circuits, and said first and second switching means being triggered to said active conditions by applying an electrical pulse to said first and second control pins.

3. An implantable defibrillation system for delivering mono-phasic, multi-phasic, and sequential defibrillation pulses to a heart via a pair of electrodes implanted on or about the heart, said system comprising:

an output circuit comprising capacitor means for storing a predetermined voltage, first and second switching means both connected to said capacitor means and capable of being triggered to active conditions;

a ground return terminal;

first and second electrode lead terminals connected, respectively to said first and second switching means and to said pair of electrodes;

[third and] fourth and third switching means for selectively connecting said first and second electrode lead terminals, respectively, to said ground return terminal when triggered to active conditions;

a control circuit for selectively triggering said first and said third switching means to said active conditions for allowing voltage stored by said capacitor means to discharge through said first and second electrode lead terminals in a first polarity, and triggering said second and fourth switching means to said active conditions for allowing voltage stored by said capacitor means to discharge through said first and second electrode lead terminals in a second polarity opposite to said first polarity.

4.

A method for generating a multi-phasic [redacted] defibrillation pulse via four independently controlled [redacted] Electrical switching elements for delivery to the heart of a patient via first and second electrodes implanted on or about the heart, said method comprising the steps of:

charging a capacitor to a predetermined voltage;

triggering a first electrical switching element connected to said capacitor and said first electrode to an active condition and triggering a third electrical switching element connected to said second electrode and a ground terminal to an active condition for delivering voltage through said first an second electrodes to the heart in a first polarity;

triggering a second electrical switching element connected to said capacitor and said second electrode to an active condition and triggering a fourth electrical switching element connected to said first electrode and a ground terminal to an active condition for delivering voltage through said first and second electrodes to the heart in a second polarity opposite to said first polarity.

5. An implantable defibrillation system for delivering mono-phasic, multi-phasic and sequential defibrillation pulses to a heart via a pair of discharge electrodes implanted on or about the heart, said system comprising:

sensing electrode means mounted on or about the heart;

arrhythmia sensing means connected to said sensing electrode means for detecting an arrhythmia of the heart;

an output circuit comprising capacitor means for storing a predetermined voltage; first and second switching means connected to said capacitor means and said discharge electrodes, and capable of being triggered to active conditions; a ground return terminal; first and second electrode lead terminals connected, respectively, to said first and second switching means and to said pair of electrodes; [third and] fourth and third switching means for selectively connecting said first and second electrode lead terminals, respectively, to said ground return terminal when triggered to active conditions;

control means for selectively triggering said first and said third switching means to said active conditions for allowing voltage stored by said capacitor means to discharge through said first and second electrode lead terminals in a first polarity, and triggering said second and fourth switching means to said active conditions for allowing voltage stored by said capacitor means to discharge through said first and second electrode lead terminals in a second polarity opposite to said first polarity.